

REMARKS

Claim 9 has been added. Support in Applicants' specification for the new claim can be found at page 3, lines 17-19. Claims 1-9 are now pending in the present application. Reconsideration and withdrawal of the present rejection in view of the amendments and the comments presented herein are respectfully requested.

Rejection under 35 U.S.C. §103(a)

The Examiner maintained the rejection of Claims 1-8 under 35 U.S.C. §103(a) as being unpatentable over Ueda et al. (US 6,210,855) in view of Uetani et al. (US 5,424,167 and 5,290,657).

In the Advisory Action, the Examiner alleges that the comparative evidence in the application is not commensurate in scope with the claims, which do not recite the resist thickness of the composition as tested. The Examiner asserts that the use of the recited dissolution inhibitors for 1 μ m thick resist compositions is known from the Uetani reference. Based on this assertion, the Examiner alleges that the results disclosed in the specification are expected results, not unexpected results.

The Examiner noted that the arguments already presented would be probative of patentability in connection with claims in which the thickness of the resist film were recited. The thickness of the resist film is recited in new Claim 9. Accordingly, Claim 9 is believed to be patentable. However, Claims 1-8 are also believed to be patentable for the reasons set forth below.

The Uetani reference discloses the use of a novolak resin alone as a resin component, and a quinonediazide compound as a separate component. In contrast to the resin component of Uetani, the resin component recited in the present claims and for which evidence of unexpected results was provided comprises a specific type of alkali-soluble novolak resin having a weight average molecular weight of 1,000 to 50,000 with which a quinonediazide compound is combined. Thus, the resin component used in Uetani is quite different from that of the present invention. Therefore, the results presented by Uetani et al. regarding the use of dissolution inhibitors for 1 μ m thick film conditions relate to the use of such inhibitors for a completely different resin than that recited in the presently pending claims. As such, they do not support the allegation the results reported by Applicants are actually expected results.

Further, the results reported by the two Uetani references ('167 and '657) do not relate to the same dissolution inhibitors recited in the presently pending claims. In particular, the results reported by Uetani ('167) relate to and bis(4-hydroxy-3,5-dimethylphenyl)-2-hydroxyphenylmethane rather than to a phenolic compound corresponding to (b-11), as recited in the presently pending claims. While it is true that Uetani ('167) teaches that phenolic compounds corresponding to the compound (b-11) and bis(4-hydroxy-3,5-dimethylphenyl)-2-hydroxyphenylmethane, are functionally equivalent, equivalent results are not obtained. As demonstrated by Example 3 and Comparative Example 5 of the present application, there is a significant difference in effects (such as perpendicularity of the pattern side walls, resolution and exposure margin) between the recited compound (b-11) and the bis(4-hydroxy-3,5-dimethylphenyl)-2-hydroxyphenylmethane) taught by Uetani. Therefore, even one of ordinary skill in the art combined Ueda (disclosing a photosensitive novolak resin corresponding to the component (A) recited in Claim 1 of the present application) with Uetani ('167) (disclosing the compound (b-11) recited in claim 1 of the present application side by side with bis(4-hydroxy-3,5-dimethylphenyl)-2-hydroxyphenylmethane), the significant difference in effects described above could not have been predicted based on this combination.

Similarly, the results reported by Uetani ('657) relate to and bis(4-hydroxy-3,5-dimethylphenyl)-2hydroxyphenylmethane rather than to a phenolic compound corresponding to (b-1), as recited in the presently pending claims. As demonstrated by Example 1 and Comparative Example 2 of the present application, there is a significant difference in effects (such as heat resistance, developing rate and perpendicularity) between the compound (b-1) and bis(4-hydroxy-3,5-dimethylphenyl)-2hydroxyphenylmethane. Such a significant difference in effects could not have been predicted based on the combination of Ueda and Uetani ('657).

Thus, even if there were a *prima facie* case obviousness, the unexpected, superior results obtained when the compound (b-1) is used as a dissolution promoter in combination with the specific alkali-soluble novolak resin (A), would effectively rebut any such showing because such unexpected results could not have been predicted based on the teachings of Ueda and Uetani ('657).

In view of the amendments and comments presented above, Applicants respectfully request reconsideration and withdrawal of the two rejections under 35 U.S.C. 103(a).

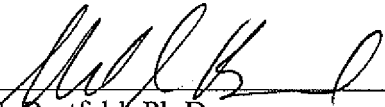
CONCLUSION

Applicants submit that all claims are in condition for allowance. However, if minor matters remain, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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